

What is claimed is:

1. An apparatus for network management in a heterogeneous environment, comprising:

5 a relational interface adapted to receive a relational query from a software application requesting management information from a specified information source;

a relational mapper adapted to translate the relational query received through the relational interface from the software application, to native protocol messages  
10 according to an access protocol associated with the information source; and

a protocol transaction handler adapted to handle the native protocol messages as a transaction with the information source, and return a result of the transaction  
15 to the software application.

2. The apparatus of claim 1, wherein the relational mapper includes a relational model of the information source.

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3. The apparatus of claim 1, wherein the relational mapper is adapted to translate a query to plural messages corresponding to plural access protocols.

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4. The apparatus of claim 1, wherein the relational mapper is expandable to receive queries directed to

additional information sources which use other protocols different from said access protocol, transparent to said software application.

5           5.    The apparatus of claim 1, wherein the collection of information of the information source is viewed as a relational database.

6.    The apparatus of claim 1, wherein the relational  
10   query is independent of management and/or access protocols.

7.    The apparatus of claim 1, wherein the translation of the relational query to native protocol messages is an abstraction transparent to said software application.  
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8.    The apparatus of claim 1, wherein a form of the relational query does not depend on the access protocol to which the relational query is to be translated.

20           9.    A relational modeller apparatus adapted to translate a relational query from a software application requesting management information from a specified information source, to native protocol messages according to an access protocol associated with the information  
25   source, wherein said native protocol messages is handled as a transaction with the information source.

10. A computer data signal embodied in a transmission medium, for network management in a heterogeneous environment, comprising:

a first segment including relational interface code to  
5 receive a relational query from a software application requesting management information from a specified information source;

a second segment including relational mapper code to translate the relational query received from the software  
10 application, to native protocol messages according to an access protocol associated with the information source; and

a third segment including protocol transaction handler code to handle the native protocol messages as a transaction with the information source, and return a  
15 result of the transaction to the software application.

11. A method for network management in a heterogeneous environment, comprising:

receiving a relational query from a software  
20 application requesting management information from a specified information source;

translating the relational query received from the software application, to native protocol messages according to an access protocol associated with the information  
25 source; and

handling the native protocol messages as a transaction

with the information source and returning a result of the transaction to the software application.

12. A computer system, comprising:

5 a processor; and

a program storage device readable by the computer system, tangibly embodying a program of instructions executable by the processor to perform the method claimed in claim 11.

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13. A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform the method claimed in claim 11.

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14. A computer data signal transmitted in one or more segments in a transmission medium which embodies instructions executable by a computer to perform the method claimed in claim 11.